



Fortinet® Transceivers

Transceiver Modules for
Fortinet Products



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Fortinet's range of pluggable copper and optical transceiver modules are designed to complement Fortinet appliances that support transceiver module slots, including the FortiGate®, FortiSwitch™ and other appliance platforms.

Take the guesswork out of selecting transceivers

Common connectivity problems in enterprise and data center networks are often traced back to low-quality and incompatible transceiver modules, rather than a fault in the network appliances themselves. Fortinet's transceivers have been purpose-built and tested to work with Fortinet equipment, ensuring that your network is as stable and robust as possible, and taking the guesswork out of selecting compatible transceivers.

Wide range for maximum flexibility

Supporting various form factors, media types and throughput, Fortinet transceivers provide connectivity options to meet many different network architectures and deployment scenarios. Whether your network demands high-speed 100 GE inside the data center, or long-range 1 GE to connect data centers in different cities, Fortinet has a transceiver to meet your needs.

Key Features & Benefits

Various Interface Options	Fortinet transceivers support various interfaces, including: SFP, SFP+, DAC and newer high-speed standards including QSFP+ and CFP2.
Tested for Compatibility	You can rest assured that your Fortinet transceivers have been tested for compatibility on Fortinet products, taking the guess-work out of selecting transceivers for your environment.
Maximize Network Uptime	Eliminate connectivity problems to maximize network uptime by using quality transceivers, designed to work with Fortinet products.
Cost Effective	Transceiver modules can be expensive, especially those with sensitive high-speed optics. Fortinet delivers high-quality transceivers, while keeping cost to a minimum.

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High-Performance Transceiver Modules for High-Performance Network Security Appliances

- Copper and optical options
- Supports SFP, SFP+, QSFP+, DAC and CFP2 slots
- Performance from 1 Gbps to 100 Gbps
- Tested for compatibility with Fortinet appliances



SPECIFICATIONS

	FG-TRAN-GC	FG-TRAN-SX	FG-TRAN-LX	FG-TRAN-SFP+SR	FG-TRAN-SFP+LR	FG-TRAN-QSFP+SR
Hardware Specifications						
Protocol Standard	1000Base-T	1000Base-SX	1000Base-LX	10GBase-SR	10GBase-LR	40GBase-SR4
IEEE Standard	802.3ab	802.3z	802.3z	802.3ae	802.3ae	802.3ba
Module Type	SFP	SFP	SFP	SFP	SFP+	QSFP+
Hot Plug	Yes	Yes	Yes	Yes	Yes	Yes
Data Link Rate for Ethernet	1.25 Gbps	1.25 Gbps	1.25 Gbps	10 Gbps	10 Gbps	1.06 Gb/s–41.2 Gbps
Media	copper interface	MM	SM	MM	SM	SM
Wavelength (nm)		850	1310	850	1310	750–980
Laser Type	NA	vcSEL	Fabry Perot	vcSEL	CWDM DFB laser, PIN receiver	VCSEL (4channel), PIN
Transmit Power (dBm)		min = -9, max = -1	min = -9.5, max = -3.0	min = -4.3, max = -1	min = -8.2, max = 0.5	min = -7.6, max = -1
Receive Power (dBm)		receiver sensitivity = -19	receiver sensitivity = -20	receiver sensitivity = -11.1	receiver sensitivity = -12.6	receiver sensitivity = -5.4
Connector Type	RJ-45	Duplex LC	Duplex LC	Duplex LC	Duplex LC	Single 1x12 MPO
Power Dissipation	1.05 W	<800 mw	< 830 mw	600 mw	850 mw	<1.5 W
Transmission Range	100 m	220 m / 500 m	10 km	300 m	10 km	100 m (OM3)–150 m (OM4)
Operating Temperature Range	0–85°C	0–70°C	0–70°C	0–70°C	0–85°C	0–70°C
Serial ID PROM	Yes	Yes	Yes	Yes	Yes	Yes
Digital Monitoring	No	No	Yes	Yes	Yes	Yes
Auto Negotiation	Yes	NA	NA	NA	NA	NA
Link Status	Yes	Yes	Yes	Yes	Yes	Yes

	FG-TRAN-QSFP+LR	SP-CABLE-ADASFP+	FG-TRAN-CFP2-SR10	FG-TRAN-CFP2-LR4	FG-TRAN-XFP-SR	FG-TRAN-XFP-LR
Hardware Specifications						
Protocol Standard	40Gbase-LR4	DAC	100GBase-SR10	100GBase-LR4	10GBase-SR	10GBase-LR
IEEE Standard	802.3ba		802.3ba	802.3ba	802.3ae	802.3ae
Module Type	QSFP+		CFP2	CFP2	XFP	XFP
Hot Plug	Yes		Yes	Yes		
Data Link Rate for Ethernet	41.2 Gbps	1 G–10 Gbps	103.12 Gbps	103.1 Gbps		
Media	SM		MM	SM	MM	SM
Wavelength (nm)		NA	850	1310	850	1310
Laser Type	4x 10 G uncooled CWDM (DFB)	NA	VCSEL (10 channel), PIN	4x 26 Gb DFB LAN-WDM laser	VCSEL	EML laser, PIN
Transmit Power (dBm)	min = -4.8, max = 8.3				min = -7.3, max = -1	min = -6.0, max = -1
Receive Power (dBm)	receiver sensitivity = -11.5				receiver sensitivity = -11.1	receiver sensitivity = -14.4
Connector Type	Duplex LC	SFP+ card edge connector	24 fiber MPO	Duplex LC	Duplex LC	Duplex LC
Power Dissipation	<3.5 W			<8 W	1.5 W	<2.5 W
Transmission Range	10 km	.5 m–15 m	100 m (OM3)–150 m (OM4)	10 km	300 m (OM3)	10 km
Operating Temperature Range	0–70°C		0–70°C	0–70°C	0–70°C	0–70°C
Serial ID PROM	Yes	Yes	Yes	Yes	Yes	Yes
Digital Monitoring	Yes	Yes	Yes	Yes	Yes	Yes
Auto Negotiation	NA	NA	NA	NA	NA	NA
Link Status	Yes		Yes	Yes	Yes	Yes

SPECIFICATIONS

	FS-TRAN-GC	FS-TRAN-SFP+SR	FR-TRAN-SX	FR-TRAN-LX	FR-TRAN-ZX
Hardware Specifications					
Protocol Standard	1000 Base-T	10GBase-SR	1000Base-SX	1000Base-LX	1000Base-LX
IEEE Standard	802.3ab	802.3ae	802.3z	802.3z	802.3z
Module Type	SFP	SFP	SFP	SFP	SFP
Hot Plug	Yes	Yes	Yes	Yes	Yes
Data Link Rate for Ethernet	1.25 Gb/s	10 Gb/s	1.25 Gb/s	1.25 Gb/s	1.25 Gb/s
Media	copper interface	MM	MM	SM	SM
Wavelength (nm)		850	850	1310	1550
Laser Type	NA	vcsel	vcsel	Fabry Perot	DFB Laser
Transmit Power (dBm)		min = -4.3, max = -1	min = -9, max = -2.5	min = -9.5, max = -3.0	min = 0, max = 5
Receive Power (dBm)		receiver sensitivity = -11.1	receiver sensitivity = -18	receiver sensitivity = -19	receiver sensitivity = -22
Connector Type	RJ-45	Duplex LC	Duplex LC	Duplex LC	Duplex LC
Power Dissipation	1.05 W	600 mw	<500 mw	<600 mW	<700 mW
Transmission Range	100 m	300 m	500 m	10 km	90 km
Operating Temperature Range	0–85°C	0–70°C	-40–85°C	-40–85°C	-40–85°C
Serial ID PROM	Yes	Yes	Yes	Yes	Yes
Digital Monitoring	No	Yes	Yes	Yes	Yes
Auto Negotiation	Yes	NA	NA	NA	NA
Link Status	Yes	Yes	Yes	Yes	Yes

ORDER INFORMATION

Product	SKU	Description
1 GE SFP LX transceiver module	FG-TRAN-LX	1 GE SFP LX transceiver module for all systems with SFP and SFP/SFP+ slots
1 GE SFP RJ45 transceiver module	FG-TRAN-GC	1 GE SFP RJ45 transceiver module for all systems with SFP and SFP/SFP+ slots
1 GE SFP SX transceiver module	FG-TRAN-SX	1 GE SFP SX transceiver module for all systems with SFP and SFP/SFP+ slots
10 GE SFP+ transceiver module, short range	FG-TRAN-SFP+SR	10 GE SFP+ transceiver module, short range for all systems with SFP+ and SFP/SFP+ slots
10 GE XFP transceiver module, short range	FG-TRAN-XFPSR	10 GE XFP transceiver module, short range for all systems with XFP slots
10 GE SFP+ transceiver module, long range	FG-TRAN-SFP+LR	10 GE SFP+ transceiver module, long range for all systems with SFP+ and SFP/SFP+ slots
10 GE XFP transceiver module, long range	FG-TRAN-XFPLR	10 GE XFP transceiver module, long range for all systems with XFP slots
40 GE QSFP+ transceivers, short range	FG-TRAN-QSFP+SR	40 GE QSFP+ transceivers, short range for all systems with QSFP+ slots
40 GE QSFP+ transceivers, long range	FG-TRAN-QSFP+LR	40 GE QSFP+ transceivers, long range for all systems with QSFP+ slots
10 GE SFP+ active direct attach cable, 10m / 32.8 ft	SP-CABLE-ADASFP+	10 GE SFP+ active direct attach cable, 10m / 32.8 ft for all systems with SFP+ and SFP/SFP+ slots
100 GE CFP2 transceivers, long range	FG-TRAN-CFP2-LR4	100 GE CFP2 transceivers, long range, over single mode fiber, for all systems with CFP2 slots
100 GE CFP2 transceivers, short range	FG-TRAN-CFP2-SR10	100 GE CFP2 transceivers, 10 channel parallel fiber, short range for all systems with CFP2 slots
1 GE SFP RJ45 transceiver module	FS-TRAN-GC	1 GE SFP RJ45 transceiver module for FortiSwitch with SFP and SFP/SFP+ slots
10 GE SFP+ transceiver module, short range	FS-TRAN-SFP+SR	10 GE SFP+ transceiver module, short range for FortiSwitch with SFP+ and SFP/SFP+ slots
1 GE SFP SX transceivers, MMF, -40–85°C operation	FR-TRAN-SX	1 GE SFP SX transceiver module, -40–85°C, over MMF, for all systems with SFP and SFP/SFP+ slots
1 GE SFP LX transceivers, SMF, -40–85°C operation	FR-TRAN-LX	1 GE SFP LX transceiver module, -40–85°C, over SMF, for all systems with SFP and SFP/SFP+ slots
1 GE SFP transceivers, 90 km range, -40–85°C operation	FR-TRAN-ZX	1 GE SFP transceivers, -40–85°C operation, 90 km range for all systems with SFP slots



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